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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/801,041	03/16/2004	Jin Hong Kim	46500-000143/US	1235
30593	7590	12/02/2005	EXAMINER	
HARNESS, DICKEY & PIERCE, P.L.C.			RAEVIS, ROBERT R	
P.O. BOX 8910			ART UNIT	
RESTON, VA 20195			PAPER NUMBER	
			2856	

DATE MAILED: 12/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/801,041

Applicant(s)

KIM ET AL.

Examiner

Robert R. Raevis

Art Unit

2856

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 November 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 and 7-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 8-14 is/are allowed.
- 6) ☒ Claim(s) 1-5 and 7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claims 1,2,4,5,7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakagawa et al in view of Roach, and further in view of Simmons, III.

Nakagawa et al teach an apparatus, including: tapered rotation body (visible in Figure 1, immediately between disc 2 and shaft 1), and scratching element 4. The scratcher applies a force not to exceed "3 kg/cm²" (col. 4, line 29), reference is made to applying a force equal to the "weight of the test piece" (col. 3, line 25). Figure 3 appears to illustrate some level of scratching, as evidenced by the lack of a smooth wear line.

Nakagawa does not refer to the tapered rotation body as a plate, does not state that the rotation body is "configured" to rotate an optical disc, and does not provide particulars as to a frame to cause the scratching unit to apply pressure.

As to claims 1,2,4,5,7, it would have been obvious for the tapered body to hold an 8-12 inch diameter rotor for testing as Roach teaches (col. L6, lines 55-60) that rotors employ diameters of 8 to 12 inches. Also, it would have been obvious to employ a frame to hold the element because Kobayashi teaches use of a holder 6 to secure a wear element against a rotating surface 3 of interest for a wear tester. In addition, as it is obvious for Nakagawa device to be configured to rotate such a diameter rotor, is apparent that Nakagawa device is also configured to rotate a similarly sized diameter object (like Simmons 5-14 inch diameter optical disk, whose size is taught on col. 8, lines 25-35). If a device is configured to rotate disc of a particular diameter, it is (inherently) configured to rotate other discs of that same dimension, even if the basis of the configuration is to allow the disk to rest on a flat surface. Finally, the tapered body

in Figure 1 is tapered outward like a plate, and as it rotates, it may be deemed to be a rotation plate. While the tapered body and shaft 1 appear in the figure to be an integral element, it would have been less expensive to secure a readily available metal (insert) plate to a readily available rotatable metal rod to provide for the test element, as opposed to providing an integrally molded combination.

As to claim 7, Nakagawa's rotating shaft 1 and reference to "300 rpm" (col. 4, line 8) is suggestive of motor usage.

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nakagawa et al in view of Roach, and further in view of Simmons, III as applied to claim 1 above, and further in view of Hupf.

Nakagawa relates to both brake and clutch plates, but does not refer to steel wool.

As to claim 3, it would have been obvious to employ steel wool as the test piece 4 because Hupf teaches (col. 4, lines 1-10) that steel wool may is desirably used in abrasion testers because it has various grades that permit for a selection of the level of rigorousness desired in testing.

As to Applicant's REMARKS, it was noted that the optical disc is "not" (p. 8) part of the apparatus. Thus, as the Nakagawa/Roach references teach rotating a similarly sized disc, that teaching suggestive of a device that is configured to rotate a similarly sized (optical) disc.

As to claim 8, note was made of “based on the scratch” and “optical” disc with remaining claim limitations. Admitted art (p. 3 of written specification) states that the “taber abrasion test” creates a abrasive wear that is “very different from the scratches on the optical disc” (line 5 from last on p. 3), suggestive that the claimed method truly does base determination upon a scratch, as is carried out in the “pencil hardness test” (p. 3, line 7). The main reference Nakagawa measures abrasion, not scratches.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert R. Raavis whose telephone number is 571-272-2204. The examiner can normally be reached on Monday to Friday from 7am to 4:30pm. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Robert R. Raavis

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